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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,782	09/01/2000	Paul R. Marshall	PHB 34,386	5639

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EXAMINER

CHOW, CHARLES CHIANG

ART UNIT PAPER NUMBER

2618

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/653,782	Applicant(s) MARSHALL ET AL.	
	Examiner Charles Chow	Art Unit 2685 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8, 10 and 11 is/are pending in the application.
 4a) Of the above claim(s) 6, 7 and 9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 10 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2618

Detailed Action

1. This office action is for the amendment received on 2/22/2006. In the amendment, applicant argued the no teachings of the detecting the presence of a carrier, the presence of the carrier signal is not detected, from the cited reference Maru [page 6 of applicant's amendment].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maru (US 4,977,611) in view of Lee (US 5,369,798).

Regarding **claim 1**, Maru teaches a method of operating a receiver [the method of operating receiver Rx 3 under the control from CPU 5 via switch 9, Fig. 1, abstract, col. 3, lines 1-17], energizing the receiver [the receiver is powered on by activating a key in col. 3, lines 42-44; or the receiver is powered on at t0, col. 4, lines 34-37, Fig. 4B or],

detecting the presence of a carrier signal [the detecting circuit 60 is responsive to the signal strength of the electric fields which may be developed on the respective channels in col. 1, lines 58-66 & the field strength detector circuit 60 via **A/D 62** sends detected carrier **data to CPU5** for controlling power supply to the receiver via **power supply switch 9** in col. 6, lines 44-54. In applicant claim 2, the detecting of the presence of the carrier is to measuring RSSI],

Art Unit: 2618

such that the receiver [3] is de-energized substantially immediately without waiting for expiration of any time period [the no any carrier data from A/D 62 is found after a predetermined 60 seconds, the battery saving mode is initiated in col. 3, lines 27-38. **During battery saving scanning, the receiver is powered off immediately at time t7 when no carrier data from A/D 62 is found on channels 323-343**, Fig. 5A/5B & col. 4, lines 54-63; no A/D data to CPU 5, then shuts off battery power to receiver 3 via switch 9].

Maru fails to teaches the accessing the quality of the demodulated signal, such that the receiver is de-energized, if the quality is not acceptable.

Lee teaches demodulating the detected carrier signal [the detecting, selecting, of the detected largest RSSIs, abstract], and

the accessing the quality of the demodulated signal, such that of the receiver is de-energized if the quality of the demodulated signal is not acceptable [the accessing the quality count for 10 failure counts in step 115, then to turn off phone at step 116, Fig. 4; switch off portable telephone in col. 2, lines 3-5],

the decoding the demodulated signal if the signal quality is acceptable [the processor resumes normal operating to demodulating overhead message, col. 1, lines 51-57], in order to reliably controlling of the battery power saving due to the abrupt RSSI fading away, poor quality [col. 1, lines 35-40]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Maru with Lee's fail counts for quality, in order to reliably controlling of the battery power saving during abrupt RSSI changes.

Regarding **claim 2**, Maru teaches the characterized by measuring the received signal strength RSSI as a means for detecting the presence of the carrier signal [the detecting of RSSI at detector 60 & sending detected carrier data via A/D 62 to CPU5, Fig. 10 col. 6, lines 36-49].

Art Unit: 2618

Regarding **claim 3**, Maru combined with Lee for the teachings from Lee, for the characterized by measuring signal quality as a measure for determining if a signal is decodable [the detecting of word synchronization data by processor 508 to measure the quality by increasing the number of failure to detect the synchronization word, col. 4, lines 54-63].

Regarding **claim 4**, Maru teaches a communication system comprising a primary station [central station] having transmitter for transmitting signal [the central station has the transmitter for transmitting signal to subscriber telephone 100, col. 2, line 50] and at least one secondary station [portable radio telephone 100] having a receiver [3] for receiving signals from the primary station [central station],

the receiver comprising signal receiving means [3] for detecting the presence of a received signal [the detecting circuit 60 is responsive to the signal strength of the electric fields which may be developed on the respective channels in col. 1, lines 58-66 & field strength detector circuit 60 via **A/D 62** sends detected carrier **data to CPU5** for controlling power supply to the receiver via **power supply switch 9** in col. 6, lines 44-54. In applicant claim 2, the detecting of the presence of the carrier is to measuring RSSI],

power control means [9, CPU5] for de-energizing the receiver substantially immediately without waiting for expiration of any time period if the presence of the signal is detected [the no any carrier data from A/D 62 is found after a predetermined 60 seconds, the battery saving mode is initiated in col. 3, lines 27-38. **During battery saving scanning, the receiver is powered off immediately at time t7 when no carrier data from A/D 62 is found on channels 323-343**, Fig. 5A/5B & col. 4, lines 54-63; no A/D data to CPU 5, then shuts off battery power to receiver 3 via switch 9].

Art Unit: 2618

Maru fails to means for detecting the quality signal of received signal, and detected signal is not decodable.

Lee teaches these features [the processor 50 counts the quality for failed detection of received synchronization word, not decodable, col. 4, line 54-63], in order to reliably controlling of the battery power saving due to the abrupt RSSI fading away, poor quality [col. 1, lines 35-40]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Maru with Lee's fail counts for quality, in order to reliably controlling of the battery power saving during abrupt RSSI changes.

Regarding **claim 5**, Maru teaches the means for determining RSSI [the field strength detector 60] is coupled to the signal receiving means [the 60 is coupled to the receiving means, at the output of the IF amplifier 56, for signal from antenna 1, Fig. 10].

Allowable Subject Matter

3. The following is an examiner's statement of reasons for allowance:

Claims 8, 10-11 are allowable over the prior art of record. The prior arts fail to teach the allowable features, singly, particularly, or in combination, for the microprocessor coupled to the signal quality indicator circuit and the decoder circuit;

wherein the microprocessor is operable to energize and de-energized the receiver circuit; determining the presence of a carrier with a carrier detect false rate, based, at least in part, on the power of the channel, and to **determine an acceptable signal quality with a signal quality false rate, based, at least in part, on an output of the signal quality indicator circuit**;

wherein the microprocessor is operable to energize the receiver circuit for a first period of time, and if the carrier is determined to be present, to then maintain the receiver in the energized state until a determination is made as to whether acceptable signal

Art Unit: 2618

quality has been obtained, and to de-energize the receiver substantially immediately without waiting for expiration of any time period if the carrier is determined to be present and the signal quality is not acceptable [independent claim 8].

The dependent claims 10-11 are also allowable due to their dependency upon the independent claim 8 and comprising additional claimed features associated to the features of the independent claims.

The closest prior art **Maru (US 4,977,611)** teaches the detecting circuit 60 is responsive to the signal strength of the electric fields which may be developed on the respective channels [col. 1, lines 58-66 &] for de-energizing the receiver in during battery saving scanning to powering off receiver immediately at time t7 when no carrier data from A/D 62 is found on channels 323-343, Fig. 5A/5B & col. 4, lines 54-63],

but failed to teach the microprocessor coupled to the signal quality indicator circuit and the decoder circuit; the determining the presence of a carrier with a carrier detect false rate, based, at least in part, on the power of the channel; the **determining an acceptable signal quality with a signal quality false rate**, based, at least in part, on an output of the signal quality indicator circuit; the maintaining the receiver in the energized state until a determination is made as to whether acceptable signal quality has been obtained, and to de-energize the receiver substantially immediately without waiting for expiration of any time period **if the carrier is determined to be present and the signal quality is not acceptable**.

Lee (US 5,369,798) Lee teaches the detecting of the largest RSSIs [abstract], the accessing the quality failure counts for 10 failure counts [step 115], then to turn off phone in step 116 [Fig. 4 & in col. 2, lines 3-5]; the processor resumes normal operating to demodulating overhead message [col. 1, lines 51-57], in order to reliably controlling of the

Art Unit: 2618

battery power saving during abrupt RSSI changes [col. 1, lines 35-40], but fail to teach the microprocessor coupled to the signal quality indicator circuit and the decoder circuit; the determining the presence of a carrier with a carrier detect false rate, based, at least in part, on the power of the channel; the **de-energizing the receiver substantially immediately** without waiting for expiration of any time period **if the carrier is determined to be present and the signal quality is not acceptable**.

Other prior arts in below were also considered, but they fail to teach the above allowable features.

Besharat et al. (US 6,219,540 B1) teaches the quality detector 154 for detecting out-of-range, in-range, for generating power supply control signal to disable the power to receiver 104 when out of range is detected [col. 2, line 63 to col. 3, line 17; col. 9, lines 21-36 and col. 10, lines 16-19], the maintaining power supply to receiver 104 to enable in-range detection signal transmission, col. 2, line 6 to col. 3, line 17].

Deluca et al. (US 5,144,296) teaches the generating a quality indication signal based on the predetermined carrier-to-noise ratio, such as +6 dB [col. 7, col. 32-37, Fig. 2], the conserving power supply for the receiver [steps 618, Fig. 6], when either the received bit is not the self address bit [step 616] or when maximum error counts occurs [steps 626].

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Argument

4. Applicant's arguments with respect to claims 1-5, 8, 10-11 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2618

Regarding the argument for the no teachings from cited Maru, for the detecting the presence of a carrier signal, such that the receiver is de-energized substantially immediately without waiting for expiration of any time period, if the present of the carrier signal is not detected [page 6 of applicant's amendment],

Maru does teach these features [the detecting circuit 60 is responsive to the signal strength of the electric fields which may be developed on the respective channels in col. 1, lines 58-66 & field strength detector circuit 60 via **A/D 62** sends detected carrier **data to CPU5** for controlling power supply to the receiver via **power supply switch 9** in col. 6, lines 44-54. In applicant claim 2, the detecting of the presence of the carrier is to measuring RSSI],

such that the receiver [3] is de-energized substantially immediately without waiting for expiration of any time period [the no any carrier data from A/D 62 is found after a predetermined 60 seconds, the battery saving mode is initiated in col. 3, lines 27-38. During battery saving scanning, the receiver is powered off immediately at time t7 when no carrier data from A/D 62 is found on channels 323-343, Fig. 5A/5B & col. 4, lines 54-63; no A/D data to CPU 5, then shuts off battery power to receiver 3 via switch 9].

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

Art Unit: 2618

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow CC.

March 19, 2006.


4/3/2006

NGUYEN T. VO
PRIMARY EXAMINER